

LIV.—*Species of Tabanus from Polynesia in the British Museum and in the late Mr. Verrall's Collection.* By GERTRUDE RICARDO.

VERY few species have been described from this region.

From New Caledonia: *T. albonotatus*, Bigot, now changed to *T. caledonicus*, as the original name is preoccupied—this species belongs to Group IX. (see 'Indian Records,' iv. p. 114, 1911), with paler bands and spots on abdomen.

From Lifu Island: *T. lifuensis*, Bigot, belonging to Group X., with the abdomen unicolorous.

From New Hebrides: *T. expulsus*, Wlk.—this type is not to be found in the Brit. Mus. Coll.

From Sidney Island in the Phœnix Islands: *T. sidneyensis* and *T. nigriventris*, Macquart—I have not been able to trace either of these types, the latter is said to have hairy eyes.

This Sidney Island is mentioned by Macquart in his introduction to the 1st Supplement of Dipt. Exot. p. 134, as supplying some species common to Tasmania. Australia is wrongly given as the locality in Kertész' Cat., Sidney the town evidently being confused with this island.

From the Sandwich Islands: *T. insularis*, Wlk.—this type is not to be found in the Brit. Mus. Coll.

Two new species are now described, both belonging to Group IX., viz. :—

*Tabanus fijianus* from Fiji and New Hebrides.

*Tabanus rubicallosus* from New Caledonia.

*Tabanus lifuensis*, Bigot.

Mém. Soc. Zool. de France, v. p. 689 (1892).

Type, a male in the late Mr. Verrall's coll. from the island of Lifu.

A medium-sized reddish species. *Antennæ* reddish, the first two joints with black hairs, the third joint is destroyed. *Face* chamois-leather colour, with rather long brown hairs. *Palpi* reddish yellow, with black hairs. *Eyes* bare, occupying the greater part of head, the large facets reaching beyond the apex of frontal triangle, and almost reaching the vertex. *Thorax* and *abdomen* dull reddish, the former with dark stripes, sides and breast the same colour as face, pubescence on abdomen appears to be chiefly black, consisting of short pubescence, sides with yellow hairs; underside same as

dorsum. *Legs* reddish, lighter in colour than abdomen. *Wings* clear, yellow on fore border; stigma yellow; veins yellowish.

Length 12 mm.

*Tabanus caledonicus*, Ricardo.

*Atylotus albonotatus*. Bigot, Mém. Soc. Zool. de France, v. p. 670 (1892), nomen bis lectum.

Type, a female in the late Mr. Verrall's coll. from New Caledonia; and a male and female erroneously labelled *T. lifuensis*, Ins. Lifu, on one of Bigot's original labels, but undoubtedly identical with this type.

A stout-bodied brown species with wings tinged brown.

*Female*.—*Face* covered with brownish-yellow tomentum, a few short brown hairs on cheeks. Beard composed of brown hairs with a few yellowish ones intermixed. *Palpi* reddish yellow with black hairs, long, almost the same width throughout, ending in a long point. *Antennæ* dull reddish yellow, the first two joints with black hairs, the third long and slender, with a very short (not wide) base, with a small but acute angle representing the tooth, the remaining part narrow. Subcallus same colour as face. *Forehead* parallel, about five times as long as it is broad; the frontal callus large, almost square, not reaching the eyes, continued in a short point, yellowish in colour; the rest of the forehead is entirely shining brown, rather protuberant. *Eyes* bare. *Thorax* brownish with yellow tomentum, which causes the brown to appear as stripes. Scutellum reddish brown. Breast-sides with thick tufts of black hairs. *Abdomen* brown, in the type with very narrow pale segmentations, and on each segment a median bluntly triangular pale spot; in the other female these spots are covered with white hairs, and the segmentations are less distinct; underside brown with white-haired segmentations. *Legs* brownish, the femora reddish below, tibiae dull reddish. *Wings* large, tinged with brown, leaving the discal and basal cells somewhat paler, also the apex; veins brown; stigma reddish brown.

Length 20 mm.

*Male*.—Identical. The large facets restricted to upper part of eyes and not very large, though quite distinct. On the underside of abdomen the white hairs are restricted to the sides.

Length 21 mm.

*Tabanus rubricallosus*, ♀, sp. n.

Type (a female) and another female from New Caledonia.

A brown species covered with grey tomentum, easily distinguished by the large, shining, red, frontal callus and by the slender palpi.

Length 15 mm.

*Face* covered with whitish tomentum and with some short white pubescence. *Beard* white. *Palpi* pale yellow, some grey tomentum on base and on upper side; pubescence rather thick, a few short black hairs on upper side, otherwise the pubescence is white; in shape they are long and slender, ending in an attenuated point. *Antennæ* brown, the first two joints rather reddish with black hairs, the third joint stout with a small tooth. *Forehead* parallel, broad, about three times as long as it is broad, covered with same coloured tomentum as face; the frontal callus is shining red-brown, very large, reaching the eyes, anteriorly it encroaches on the subcallus, with a very convex border, posteriorly the border is irregular, and the sides slightly withdrawn from the border of eyes. *Thorax* black, covered with ashy-grey tomentum, leaving the ground-colour apparent as stripes; pubescence on anterior border white, elsewhere black; tufts of white hairs are present at base of wings and on breast-sides. *Scutellum* same as thorax. *Abdomen* brownish, densely covered with ashy-grey tomentum, which covers the posterior half of each segment, extending in the middle as a median triangular spot—it covers the first segment almost entirely; the anterior half of most segments has yellowish tomentum, the pubescence even on the grey borders is black, though short; underside wholly covered with grey tomentum. *Legs* brownish, the femora covered with grey tomentum, the tibiæ reddish. *Wings* clear; stigma very small, yellowish; veins reddish brown.

*Tabanus fijianus*, ♀, sp. n.

Type, a female from Fiji (*C. Knowles*), 1906, another female from Suva, Fiji, 16. 1. 1906 (*Dr. B. G. Corney*), with a note from donor, viz., "Amoys horses and cattle along a road through forest and open reed country."

Another female from Highlands of Fiji Govt. Station, alt. 2700 ft. (*Dr. B. G. Corney*), 1906.

Another female, the property of Prof. Nuttall, was caught feeding on hand in full sunshine on Lami River, Vitilevu, Fiji, Feb. 26, 1910, at 2 P.M.

A brown species marked with yellow-haired spots and segmentations on abdomen. Wings clouded on the cross-veins. Antennæ and legs reddish yellow.

Length, type 15 mm., others 13-15 mm.

Face covered with greyish tomentum, becoming yellowish on the upper border of cheeks and on subcallus; some long whitish hairs in centre of face and brown ones on cheeks. Beard white. *Palpi* yellow, covered with grey tomentum and with black pubescence, fairly stout, ending in a long obtuse point. *Antennæ* yellow, the first two joints with black hairs, the third slender, with a slight tooth, dusky at apex. *Forehead* almost parallel, about six times as long as it is broad, covered with yellowish tomentum; the frontal callus blackish, pear-shaped, not reaching the eyes, with a lineal extension extending more than half the length of the forehead. *Eyes* bare. *Thorax* brownish with black markings and with two yellow tomentose submedian stripes, sides also yellow, pubescence not very noticeable, some yellow hairs on the lighter-coloured parts and some brown ones on the dark parts, sides with black hairs, breast covered with grey tomentum and with yellow hairs. *Scutellum* brown with yellow tomentum and some yellow and black hairs. *Abdomen* reddish brown with some black markings, and with yellow tomentose segmentations and median triangular spots, all covered with yellow pubescence; underside almost wholly covered with the yellow tomentum and pubescence. *Legs* reddish yellow, most of the femora darker, with grey tomentum; apices of tibiae and the tarsi brown; pubescence on legs chiefly yellow. *Wings* grey, pale yellow on fore border, all the transverse veins clouded with dark brown colouring; stigma yellow; veins brown.

Four females from Aneiteum, New Hebrides, appear to belong to this species, being probably a local form of it, the differences being very slight, as follows:—*Palpi* rather less stout at base. *Thorax* darker, the tomentum being grey instead of yellow. *Scutellum* the same. *Abdomen* the same, but the median spots are not so distinct. *Legs* paler, almost a uniform reddish yellow. *Wings* clouded with brown on fore border and along the veins, besides the transverse veins.

These specimens were labelled by Walker "*signifera*," New Hebrides, but the description of them does not appear to have been published.